

June 20 - 26, 2003

<P>The Terra spacecraft is in nominal mode. All instruments are in Science Mode.</P>

<P>The MODIS Solar Diffuser Screen Anomaly Investigation Team conducted a review on the results of the instrument manufacturer's (Raytheon-Santa Barbara) thermal analysis on June 25, and included a panel of scientists and engineers separate from the Anomaly Investigation Team. Thermal stress and deformation involving the screen door and bushings appears to be the most likely cause of the failure of the screen door to open. The anomaly team recommended commanding the Solar Diffuser Door open and leaving it open permanently to restore the calibration capability for the ocean color bands. The Solar Diffuser Screen Door would be left closed permanently. This is the preferred configuration (defined pre-launch) to be established in the event of a screen door anomaly. Analysis by Raytheon and the anomaly team indicates that this action incurs little or no risk.</P>

<P>Calibration for the other affected bands will be performed by the MODIS Calibration Science Team through modeling. Modeling enables extrapolation of the results of previous calibrations and the trends of known changes in the response for the affected bands over the course of the last 3.5 years on orbit. An incident report will be filed documenting the hardware status and new calibration approach required.</P>

<P>A review of the thermal analysis and the proposed action will be conducted by the Anomaly Investigation Team, Code 300, and the GSFC Chief Engineer on Monday, June 30. A Command Authorization Meeting (CAM) for the door re-opening will be conducted by the operations team on Friday, June 27. The current goal is to re-open the door on July 2.</P>

<P>Raytheon is conducting additional thermal and mechanical analysis on the Aqua MODIS instrument and the failed Solar Diffuser Screen Door on Terra in the context of future calibrations on Aqua. Lessons learned may affect future plans for extended use of Solar Diffuser Doors in calibrations on Aqua.</P>

<P>Terra and other TDRSS user spacecraft continue to experience occasional Ku-band dropouts. The Terra Flight Operations Team has been working closely with personnel at White Sands and GSFC CSOC personnel and a designated NOM to diagnose the problem. The problem appears to have

been localized to one antenna on TDRS-5 (TDW). The FOT continues to compile statistics and investigate the problem. This problem has not resulted in real data loss as the data is always replayed when dropout problems are suspected.</P>

Plans<br>

The Flight Operations Team will re-open MODIS Solar Diffuser Door on Terra on July 2. The first in a series of three inclination adjust maneuvers is scheduled for July 8.

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